1 **If during circular motion residential love story of a body becomes double then centripetal force becomes:**

A double

B one half

C **Four Times**

D one fourth

2 **Under what condition and object will have zero displacement but non zero distance?**

A linear motion

B **circular motion**

C random motion

D oscillation

3 **Which one of the following properties is not exhibited by the longitudinal wave?**

A interference

B reflection

C defection

D **Polarization**

4 **The speed of sound in the ear is 332 M / s. the speed of sound at 22 *c will be:**

A **345.2 M / s**

B 340 M/ s

C 350 M / s

D 330 M / s

5 **Astronomers calculate speed of distance stars and galaxies using which of the following phenomena?**

A beats

B interference

C superposition principle

D **Doppler Effect**

6 **In a ripple tank, 40 ways pass through a certain point in one second. if the wavelength of the**

weve is 5 cm, then speed of the wave is:

A 0.5 ms-1

B 1 ms-1

C 1.5 ms-1

D **2 ms-1**

7 **In which process the entire of heat supplied to the gas is converted to the internal energy of the gas?**

A **Isochoric process**

B isobaric process

C isothermal process

D adiabatic process

8 **The internal energy of a system during an isothermal process:**

A degrees

B increase

C becomes zero

D **remain constant**

9 **If the potential at a point which is 1m from a charge is 1 volt, then the potential at a point which is 2m from the same charge will be:**

A 2 v

B 1 v

C **0.5 v**

D 3 v

10 **The values of electric intensity will_____ Due to the presence of dielectric medium:**

A increase

B increase exponentially

C **decrease**

D remain same

11 **The slope of distance _____ time graph will always be:**

A negative

B **positive**

C 0

D Maxim

12 At what angle of projection of a projectile the range becomes half of its maximum value?

A **15°**

B 20°

C 30°

D 40°

13 If we drop an object, its initial velocity is zero. how far will it fall in time "t" ?

A 9.8 t^2

B 4.9 t^2

C **0.49 t^2**

D 98 t^2

14 The Newton-second is unit of:

A work

B power

C **impulse**

D momentum

15 1.75 m height weight- lifter rises weights with a mass of 50 kg to a height of 0.5 m above his head. How much work is being done by him? ($g=10ms^{-2}$)

A 2125 J

B 2500 J write Answer is **250** Option is not available

C 100 J

D 50 J

16 What is the speed of 2.0 kg metallic Bob at the mean position of a simple pendulum, when released from its extreme position 0.5 m height? ($g=10ms^{-2}$)

A **3.16 ms^{-1}**

B 10 ms-¹

C 100 ms-¹

D 50 ms-¹

17 When the speed of your car is halved, by what factor does its kinetic energy decreases?

A 1/2

B 1/4

C 1/8

D 1/6

18 Which one of the following force is non conservative force?

A Frictional force

B Gravitational force

C electric force

D elastic spring force

19 The Earth rotates on its Axis once a day. suppose, by some process the earth contracts so that its radius is only halfAs large as present, then along the earth will take to complete its rotation?

A 24 hours

B 18 hours

C 6 hours

D 12 hours

20 1 Radian is equal to:

A 57 1°

B 57 2°

C 57 3°

D 57 4°

21 In translation from grid station, power losses are minimised by:

A increasing current

B decreasing current

C increasing resistance

D **increasing voltage**

22 The domestic electricity supply has a frequency of:

A 150 Hz

B 100 Hz

C 50 Hz

D **25 Hz**

23 PIV stands for:

A Positive Inverse voltage

B Power integrated voltage

C **Peak inverse voltage**

D Peek integrated voltage

24 In full wave rectification, the diodes are used:

A 1

B **2**

C 3

D 4

25 The wavelength associated with an electron is of the order of:

A Visible light

B **X-rays**

C radio waves

D infrared

26 Which Photon carries the most energy?

A Blue

B **violet**

C red

D green

27 Which one of the following series lies in the ultraviolet region?

A Balmer series

B Pascher series

C **Lyman series**

D Bracket series

28 The main difference between X rays and γ rays is?

A frequency

B wavelength

C energy

D **origin**

29 There are initially 400 atoms in a radioactive sample. what would be the number of atoms after three half-life?

A 400

B 200

C **50**

D 25

30 While using radiation therapy, cancerous thyroid is treated with _____ radioisotope:

A Carbon

B 235-Uranium

C Thorium

D **iodine-131**

31 In capacitors, energy is stored in the form of:

A Gravitation energy

B Kinetic energy

C **Electric intensity**

D Magnetic induction

32 Ohm time's farads is equivalent to:

A **Time**

B Charge

C Distance

D capacitor

33 One-kilowatt hour is commonly termed as one commercial unit of electric energy which is equal to:

A 3.6×10^5 J

B **3.6×10^6 J**

C 3.6×10^4 J

D 3.6×10^3 J

34 When a wire is compressed and its radius become 2R then its resistance will be:

A 16 R

B 4 R

C 1/16 R

D **1/4 R**

35 One of the following is an ohmic device:

A filament bulb

B Semiconductor diode

C transistor

D **copper wire**

36 The change in resistance of metallic conductor at temperature below 0 ^{0}C is:

A Non linear

B curve

C **linear**

D curvilinear

37 When current are flowing through two long Parallel wires Same direction electric field between them:

A strong

B **weak**

C	Remains same
D	infinite

38 **Magnetic flux is maximum when angle between magnetic field and vector area is:**

A	**0°**
B	90°
C	180°
D	45°

39 **Transformer is a device which steps up or Steps down the input:**

A	Current
B	**Voltage**
C	energy
D	power

40 **If a Stationary bar magnet is placed near a coil at rest maximum lines of force pass through the coil ,the Galvanometer shows:**

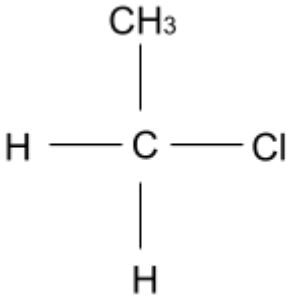
A	Maximum current
B	minimum current
C	**No current**
D	intermediate value of current

41 **Alkyl halides involving _C_X Bond breakage and_C _NU Bond formation simultaneously would follow the mechanism:**

A	SN_1
B	**SN_2**
C	E_1
D	E_2

42 **Secondary alkyl halide is:**

A



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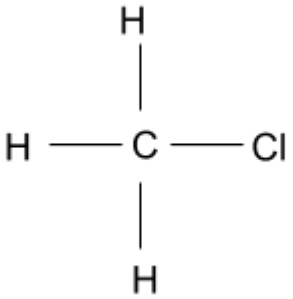

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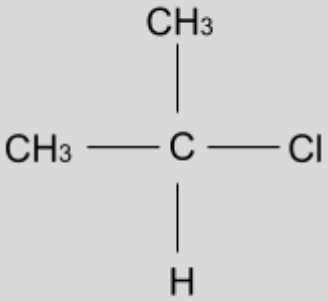


D

CH_3Cl

43 **R-X reaction with alcohols forms:**

A R-OH

B **ROR**

C R-X-OH

D RH

44 **IUPAC name of** $C_6H_5O(CH_3)_2$ **is:**

A 2-methyl-3-hexanone

B **2,6- Dimethyl cyclohexanone**

C	3 methyl cyclohexanone
D	4- methyl-3-hexanone

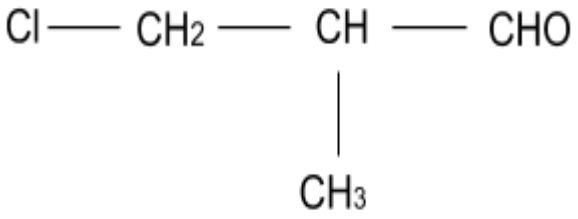
45 **Phenol is known as:**

A	Carpolic Acid
B	Carbonylic Acid
C	**Carbolic Acid**
D	Carboxylic Acid

46 **Phenol is more acidic than alcohols because of the following reason:**

A	Delocalisation of negative charge in the OH group
B	Delocalisation of positive charge on the carbon atom in ring
C	**Delocalisation of negative charge in the ring**
D	Delocalisation of positive charge in the OH group

47 The common name of following aldehyde is:



A	ۘ---Methyl--**Ý**--Chloro Propionaldehyde
B	***β***--Chloro--**Ý**--methyl Propionaldehyde
C	***β*--Chloro--ۘ--methyl Propionaldehyde**
D	***β***--methyl--ۘ--chloro Propionaldehyde

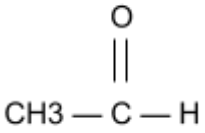
48 **Which of the following regent is used to separate purify carbonyl and non-carbonyl compounds:**

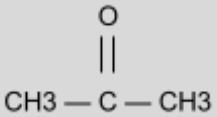
A	HCN
B	$BrMgCH_3$

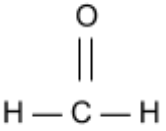
C **$NaHSO_3$**

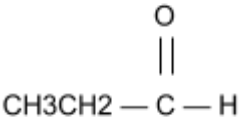
D H_2O

49 Secondary alcohol is the product of reduction of which carbonyl compound?

A 

B 

C 

D 

50 Which of the following is the strongest acid?

A Propanic acid

B Fluoroethanoic acid

C **Trichloroethanoic acid**

D Nitro Ethanoic acid

51 Hydrolysis of acyl chloride results in the formation of:

A Acid anhydride

B **Carboxylic acid**

C Amides

D Esters

52 The exact reactivity order for carboxylic acid derivatives is:

A Anhydride > Acyl Chloride > ester

B Ester > Anhydride > Acyl chloride

C Amide > Acyl chloride > ester

D **Acyl Chloride > Anhydride > ester**

53 Based on the physio-chemical properties, proteins may be classified into the following types:

A Simple proteins

B Compound proteins

C Derived proteins

D **All of the above**

54 Based on function, thyroxin can be classified as:

A **Hormonal protein**

B Structural protein

C Transport protein

D Genetic protein

55 L-Asparaginase enzyme has been used for the treatment of:

A Jaundice

B **Blood Cancer**

C Rickets

D Heart disease

56 Potassium, Rubidium, Cesium react with oxygen to form which types of oxides?

A Peroxide

B **Superoxide**

C Suboxide

D Normal Oxide

57 Magnesium reacts with Nitrogen to form:

A Mg2N2

B **Mg3N2**

C MgN2

D MgN

58 Densities of alkali metals are low due to:

A Weak intermolecular forces

B **Large atomic volume**

C Smaller size

D ns1 Configuration

59 In 3rd series of transition elements, paramagnetic behaviour is maximum for Mn+2 and:

A **Cr3+**

B Ti3+

C V3+

D Zn+2

60 Electronic configuration of chromium (Proton number 24) is:

A [Ar]$3d^4 4S^2$

B [Ar]$3d^5 4s2$

C **[Ar]$3d^5 4S^1$**

D [Ar]$3d^6 4S2$

61 The transition element which does not show variable valency os;

A Cu

B Sc

C **Zn**

D Cr

62 Select the organic compound which belongs to Arene family:

A CH2 = CH2

B CH3 — 0— CH3

C CH3 -- NH2

D **C6H6**

63 **The type of isomerism existing in a compound of molecular formula C2H60 is:**

A **Functional group**

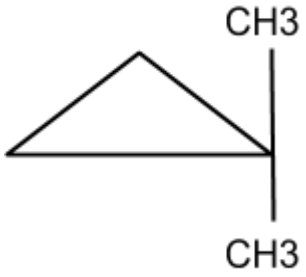
B Position

C Chain

D Metamerism

64 **Which of the following compounds show geometric isomersim?**

A



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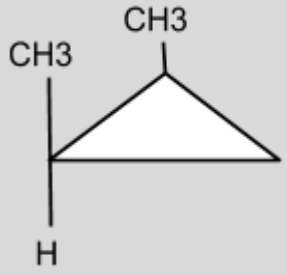

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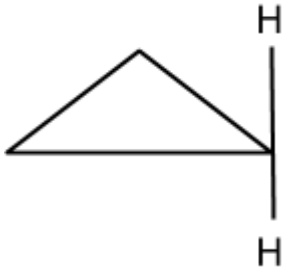

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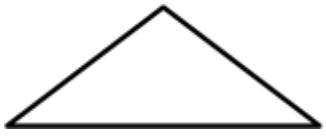


65 **Generic formula of cycloalkane is?**

A CnH2 n+2

B **CnH2n**

C CnH2n+ 1

D CnHzn-2

66 Electrophile in sulphonation of benzene is:

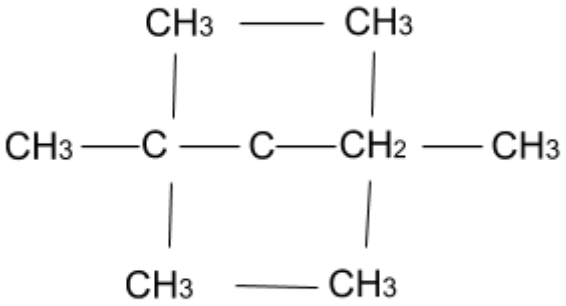
A HSO_4-

B H_2SO_4

C **$S0_3$**

D $HS0_3$-

67 The following has IUPAC name of:



A . 2,3 - tetramethyl butane

B **2,2,3,,3-tetramethyl pentane**

C 3,3,4,4 - tetramethyl butane

D 3,4- bis (dimethyl butane).

68 Acetophenone can be formed by which of the following reaction of benzene?

A Alkylation

B **Acylation**

C Halogenation

D Nitration

69 In alkanes, each Carbon has hybridization:

A **sp3**

B sp

C sp2

D dsp

70 When CH3 is attached with the benzene ring, it makes the ring:

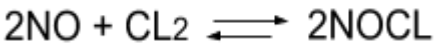
A Good electrophile

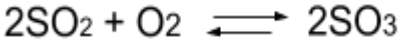
B **Good nucleophile**

C Resonance hybrid

D Extraordinary stable

71 Which of the following reaction has greater Kp than Kc (Kp> Kc)?

A 

B 

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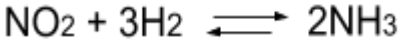
D 

72 The equation N2g+ 3H2g = 2NH3, represents:

A Contact process

B **Haber's process**

C Solvay process

D Avogadro's law

73 The unit of the rate constant is the same as that of the rate of reaction in:

A **Zero order reaction**

B First order reaction

C Second order reaction

D Third order reaction

74 The study of rates of chemical reactions and the factors that affect the rates of chemical reactions is known as:

A Thermodynamics

B Stoichiometry

C Electrochemistry

D **Chemical Kinetics**

75 **For the reaction A(g) —> products, When the concentration of' A(g) 'doubles, the rate of reaction increases four folds, which means it is:**

A Negative order reaction

B First order reaction

C Zero order reaction

D **Second order reaction**

76 **For which of the following order of the reaction, rate of reaction in inversely proportional to the concentration reaction?**

A 1^{st} order reaction

B 2^{nd} order reaction

C **Negative order of reaction**

D Zero order of reaction

77 **The thermal energy at constant pressure is called:**

A **Enthalpy**

B Internal energy

C Heat capacity

D Work done

78 **Born-Haber cycle is used to determine the lattice energies of:**

A Molecular solids

B Metallic solids

C **Ionic solids**

D Covalent solids

79 **One calorie is equal to:**

A 4.18 KJ

B **4.18**

C 0.418 KJ mol

D 0.418 KJ

80 **The oxidation state of 'S' in the $(S_2O_3)^{-2}$ is:**

A +4

B +6

C -2

D **+2**

81 **The common oxidation number of halogens is:**

A **-1**

B +1

C -2

D 0

82 **During oxidation process, oxidation number of an element:**

A Decreases

B **Increases**

C Remains constant

D Both A&B

83 **Which of the following has the height value of electronegativity?**

A 1

B Br

C Cl

D **F**

84 **Which of the following hybrid orbitals has maximum 'S' –character?>**

A Sp3 – hybrid orbital

B Sp2 – hybrid orbital

C **Sp – hybrid orbital**

D Dsp2 – hybrid orbital

85 **The first ionization energy is maximum for:**

A Na

B	**Mg**
C	Al
D	K

86 **The efficiency of chemical reaction cay be expressed as:**

A	Theoretical yield
B	Actual yield
C	**%yield**
D	Maximum yield

87 **In a vessel, 10g N2, 10g H and 10g O2 are present. Which one will have least number of atoms?**

A	H2
B	N2
C	**O2**
D	Both H2 & N2

88 **The empirical formula of Glucose C6H12O6 is:**

A	C6H12O16
B	CHO
C	**CH2O**
D	CH2O2

89 **The relationship between quantum number n and l is:**

A	N = 1-1
B	l = n-2
C	**l = n-1**
D	N = 1-2

90 **Quantum number values for '2p' orbitals are:**

A	**N=2, l=1**
B	N=1, l=2
C	N=1, l=0

D N=2, I=0

91 Which pair has 1 electron in it's 's' orbital?

A Li, Fe

B **Na & Cr**

C K & Mn

D H & He

92 Which of the following has the lowest e/m ratio?

A Li+2

B H+1

C He

D **Be**

93 According to the general gas equation density of an ideal gas depends upon:

A Pressure

B Temperature

C Molar mass of the gas

D **All of the above**

94 The actual volume of gas molecules is considered negligible at following pressures:

A **2 atm**

B 4 atm

C 6 atm

D 8 atm

95 CO_2 and SO_2 both are tri-atomic molecules but heat of vaporization of SO_2 is greater than that of CO_2 due to:

A High electronegativity of S

B Greater size of SO_2

C **SO_2 is polar and CO_2 is non-polar**

D SO_2 is more acidic than CO_2

96 **Which of the following has the lowest vapour pressure at 20 oC?**

A Diethyl ether

B Chloroform

C Carbon tetrachloride

D **Water**

97 **Which of the following is not a molecular solid?**

A **Bromine**

B Sulphur

C Phosphorus

D Carbon dioxide

98 **The lattice energy is also called as:**

A Energy of affinity

B **Bond energy**

C Crystal energy

D Potential energy

99 **For a gaseous phase reaction, when number of moles of reactants and products are equal:**

A The values of Kp and Kc are different

B The values of Kp is greater than Kc

C The values of Kc is greater than Kp

D **The values of Kp and KC are the same**

100 **Purification of table salt (NaCl) by passing HCl gas through its saturated aqueous solution is an example of:**

A Law of mass action

B Hess's law

C **Common ion effect**

D Henry's law